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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,457	03/01/2002	Marc Ian Bingley	0126-024P/FLS	6665

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EXAMINER

PRINCE, FRED G

ART UNIT	PAPER NUMBER
	Q

1724

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/087,457	BINGLEY, MARC IAN
	Examiner Fred Prince	Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 17 April 2002.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Objections***

1. Claims 2-12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations recited in the claims fail to add structural limitations to the apparatus of claim one. The process limitations as claimed are not given patentable weight in apparatus claims.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata et al.

Tabata et al., directed toward a reactor and a method of controlling an aerator with an aerator, teach a reactor with an aerator (44, 46; col. 4, lines 50-51) intermittently controlled to raise a dissolved oxygen level (col. 5, lines 1-6) and includes an inoperable phase including an anoxic time period with a second, lower dissolved oxygen level.

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4. Claims 1-13 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota (JP 5-237496).

Kubota, directed toward a reactor and a method of controlling an aerator with an aerator, teaches a reactor with an aerator (abstract) intermittently controlled to raise a dissolved oxygen level (Figs. 3 and 4) and includes an inoperable phase including an anoxic time period with an inherently lower dissolved oxygen level.

5. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hitachi (JP 7-136682) and Hitachi (JP 62-65797).

Hitachi ('682) , directed toward a reactor and a method of controlling an aerator with an aerator, teaches a reactor with an aerator (abstract) intermittently controlled to raise a dissolved oxygen level (Figs. 2 and 5) and includes an inoperable phase including an anoxic time period with an inherently lower dissolved oxygen level.

Hitachi ('797), directed toward a reactor and a method of controlling an aerator with an aerator, teaches a reactor with an aerator (abstract) intermittently controlled to raise a dissolved oxygen level (abstract) and includes an inoperable phase including an anoxic time period with an inherently lower dissolved oxygen level.

6. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (JP 11-319884).

Suzuki et al., directed toward a reactor and a method of controlling an aerator with an aerator, teach a reactor with an aerator (abstract) intermittently controlled to raise a dissolved oxygen level (Figs. 3 and 5) and includes an inoperable phase including an anoxic time period with an inherently lower dissolved oxygen level.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Goronszy.

Goronszy, directed toward a reactor and a method of controlling an aerator with an aerator, teaches a reactor with an aerator (16, 17) intermittently controlled to raise a dissolved oxygen level (Fig. 5) and vary an oxygen level (page 25, lines 7-20) and includes an inoperable phase including an anoxic time period with an inherently lower dissolved oxygen level (Fig. 5).

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Tabata et al., Kubota, Hitachi ('682), Hitachi ('797), Suzuki et al., and Goronszy.

The primary references are described above. The primary references do not explicitly disclose overriding the operative and inoperative phases with the specified multiples.

It is submitted that it is well within the purview of the skilled artisan to override the operative and inoperative phases with the specified multiples in order to ensure that the dissolved oxygen levels do not become excessively high or low.

Accordingly, it would have been obvious for the skilled artisan to have modified any one of the primary references by overriding the operative and inoperative phases with the specified multiples in order to ensure that the dissolved oxygen levels do not become excessively high or low.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (703) 306-9169. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (703) 308-3792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Fred G. Prince*  
**FRED G. PRINCE**  
**PRIMARY EXAMINER**

May 16, 2003